AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for optimizing traffic on a distributed content delivery network, comprising:

    receiving a request for content from a client at a directory server;

    identifying the client as a potential candidate server for the requested content;

    adding the client to a list of potential candidate servers;

    determining if the client is a member of an arena in a list of arenas, wherein an arena is a specified set of nodes on a network and at least one arena has a plurality of nodes; and

    if the client is a member of the arena, applying routing rules to the delivery of content to the client, including routing rules specific to the arena.

2. (Original) The method of claim 1, further comprising defining an arena by receiving input from a user and using the input to specify one or more edge routers that surround nodes on the network that are members of the arena.

3. (Original) The method of claim 1, wherein after an arena is defined, a node can be dynamically assigned to and removed from the arena as the node is physically moved.

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1   4. (Original) The method of claim 1, further comprising defining an arena

2   by receiving input from an administrator and using the input to specify a list of

3   addresses for nodes that comprise the arena.

1   5. (Original) The method of claim 1, wherein a routing rule can prohibit

2   traffic across a specific network link.

1   6. (Original) The method of claim 1, wherein a routing rule can prohibit

2   traffic across a specific network link when the network link reaches a

3   predetermined utilization.

1   7. (Original) The method of claim 1, wherein the routing rule specifies a

2   maximum amount of bandwidth that can be used for content delivery purposes on

3   a specific network link.

1   8. (Previously presented) The method of claim 1, wherein applying

2   routing rules to the delivery of content to the client involves:

3   attempting to receive content at the client from nodes on a local subnet;

4   if no nodes are available on the local subnet, attempting to receive the

5   content from nodes in a local arena;

6   if no nodes are available on the local arena, attempting to receive the

7   content from nodes in non-local arenas as specified by a fallback list;

8   if no nodes are available on non-local arenas, attempting to receive the

9   content from nodes that are topologically close on a router graph, wherein the

10 router graph specifies how the nodes on the network are interconnected; and

11   if no nodes are available on the router graph, attempting to receive the

12 content from an origin server.

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1   9. (Original) The method of claim 8, wherein the fallback list for arenas

2   specifies an ordering of arenas.

1   10. (Currently Amended) A computer-readable magnetic or optical

2   storage medium storing instructions that when executed by a computer cause the

3   computer to perform a method for optimizing traffic on a distributed content

4   delivery network, the method comprising:

5   receiving a request for content from a client at a directory server;

6   <u>identifying the client as a potential candidate server for the requested</u>

7   <u>content;</u>

8   <u>adding the client to a list of potential candidate servers;</u>

9   determining if the client is a member of an arena in a list of arenas,

10 wherein an arena is a specified set of nodes on a network and at least one arena

11 has a plurality of nodes; and

12   if the client is a member of the arena, applying routing rules to the

13 delivery of content to the client, including routing rules specific to the arena.

1   11. (Original) The computer-readable storage medium of claim 10,

2   wherein the method further comprises defining an arena by receiving input from a

3   user and using the input to specify one or more edge routers that surround nodes

4   on the network that are members of the arena.

1   12. (Original) The computer-readable storage medium of claim 10,

2   wherein after an arena is defined, a node can be dynamically assigned to and

3   removed from the arena as the node is physically moved.

1   13. (Original) The computer-readable storage medium of claim 10,

2   wherein the method further comprises defining an arena by receiving input from

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3   an administrator and using the input to specify a list of addresses for nodes that

4   comprise the arena.

1   14. (Original) The computer-readable storage medium of claim 10,

2   wherein a routing rule can prohibit traffic across a specific network link.

1   15. (Original) The computer-readable storage medium of claim 14,

2   wherein a routing rule can prohibit traffic across a specific network link when the

3   network link reaches a predetermined utilization.

1   16. (Original) The computer-readable storage medium of claim 10,

2   wherein the routing rule specifies a maximum amount of bandwidth that can be

3   used for content delivery purposes on a specific network link.

1   17. (Original) The computer-readable storage medium of claim 10,

2   wherein applying routing rules to the delivery of content to the client involves:

3   attempting to receive content at the client from nodes on a local subnet;

4   if no nodes are available on the local subnet, attempting to receive the

5   content from nodes in a local arena;

6   if no nodes are available on the local arena, attempting to receive the

7   content from nodes in non-local arenas as specified by a fallback list;

8   if no nodes are available on non-local arenas, attempting to receive the

9   content from nodes that are topologically close on a router graph, wherein the

10   router graph specifies how the nodes on the network are interconnected; and

11   if no nodes are available on the router graph, attempting to receive the

12   content from an origin server.

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1   18. (Original) The computer-readable storage medium of claim 17,

2   wherein the fallback list for arenas specifies an ordering of arenas.

1   19. (Currently Amended) An apparatus for optimizing traffic on a

2   distributed content delivery network, comprising:

3   a receiving mechanism configured to

4   receive a request for content from a client at a directory server~,~;

5   identify the client as a potential candidate server for the requested

6   content; and

7   add the client to a list of potential candidate servers;

8   a determination mechanism configured to determine if the client is a

9   member of an arena in a list of arenas, wherein an arena is a specified set of nodes

10 on a network and at least one arena includes a plurality of nodes; and

11   a routing mechanism configured to apply routing rules to the delivery of

12 content to the client, including routing rules specific to the arena, if the client is a

13 member of the arena.

1   20. (Original) The apparatus of claim 19, further comprising a definition

2   mechanism configured to define an arena by receiving input from a user and using

3   the input to specify one or more edge routers that surround nodes on the network

4   that are members of the arena.

1   21. (Previously Presented) The apparatus of claim 19, wherein the routing

2   rules specific to the arena include one or more of: an order of precedence for

3   fallback within match sets, an order of precedence for fallback between match

4   sets, identification of sets to avoid, and rules for when to return to an origin

5   server.

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1   22. (Original) The apparatus of claim 19, wherein after an arena is

2   defined, a node can be dynamically assigned to and removed from the arena as the

3   node is physically moved.

1   23. (Original) The apparatus of claim 19, further comprising a definition

2   mechanism configured to define an arena by receiving input from an

3   administrator and using the input to specify a list of addresses for nodes that

4   comprise the arena.

1   24. (Original) The apparatus of claim 19, wherein a routing rule can

2   prohibit traffic across a specific network link.

1   25. (Original) The apparatus of claim 24, wherein a routing rule can

2   prohibit traffic across a specific network link when the network link reaches a

3   predetermined utilization.

1   26. (Original) The apparatus of claim 19, wherein the routing rule

2   specifies a maximum amount of bandwidth that can be used for content delivery

3   purposes on a specific network link.

1   27. (Original) The apparatus of claim 19, wherein the routing mechanism

2   is further configured to:

3   attempt to receive content at the client from nodes on a local subnet;

4   attempt to receive the content from nodes in a local arena if no nodes are

5   available on the local subnet;

6   attempt to receive the content from nodes in non-local arenas as specified

7   by a fallback list if no nodes are available on the local arena;

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8   attempt to receive the content from nodes that are topologically close on a

9   router graph if no nodes are available on non-local arenas, wherein the router

10   graph specifies how the nodes on the network are interconnected; and

11   attempt to receive the content from an origin server if no nodes are

12   available on the router graph.

1   28. (Original) The apparatus of claim 27, wherein the fallback list for

2   arenas specifies an ordering of arenas.